

**REMARKS**

The Office Action mailed January 31, 2008 has been carefully considered.  
Reconsideration in view of the following remarks is respectfully requested.

**Amendment to Claims 1 and 3-9**

Claims 1 and 3-9 have been amended to remove reference numerals and letters therefrom for compliance with U.S. patent practice.

**Objection to Claims 8-10**

The objection to claims 8-10 based on multiple dependency apparently overlooks a preliminary amendment that was filed on August 10, 2006, in which such multiple dependency was removed. In any case, claim 8 has now been amended, in the instant Response, to make it dependent exclusively on claim 1. Claims 9 and 10 now each depends exclusively on claim 8. None of the pending claims now contain multiple dependencies.

**Canceled Claims**

Claim 2 has been canceled without prejudice or disclaimer of the subject matter contained therein.

**Art Rejection(s) Under 35 U.S.C. §§102 and 103**

Claims 1, 5 and 6 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Warburton et al. (U.S. pat. no. 5,873,054).

Claim 2 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Warburton as applied to claim 1 above, and further in view of Westphal (U.S. pat. no. 4,476,384).

Claim 3 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Warburton in view of Westphal, as applied to claim 2 above, and further in view of Arya et al. (U.S. pat. no. 4,229,654).

Claims 4 and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Warburton as applied to claim 1 above, and further in view of Warburton et al. (U.S. pat. no. 6,590,957).

Applicants respectfully traverse.

Claim 1, from which all remaining claims directly or indirectly depend, has been amended to include the limitations of claim 2, which has been canceled. As now amended, claim 1 recites “calibration means [that] include a histogram memory to sort digital data corresponding to the detected pulses that were not rejected by the pulse rejection means by calibration energy range when the detected pulses originate from a standard source.” This feature is missing from the applied references and is not suggested thereby, either singularly or in combination.

The Office Action, in addressing claim 2, acknowledges that the primary reference Warburton 054 does not disclose the missing feature, and points to secondary reference Westphal to remedy this defect. In Westphal, test pulses are counted during a gating interval at a time when the analyzer is available. The number of these test pulses is then used to determine a weighting factor which is used to increase the actual count stored in a memory during operation.

By comparison, instant claim 1 recites using a histogram memory for sorting digital data corresponding to detected pulses by calibration energy range. This unique approach is explained in page 15 of applicant’s specification, wherein it is stated that

Each pulse input into the histogram memory increments a memory box corresponding to the maximum amplitude of its energy. A search can then be made to find the box or group of boxes in which the largest number of pulses occurs. The gain can then be adjusted through the VME bus to make this maximum coincide with the expected known of the standard source.

(Specification, p. 15, ll. 12-19, emphasis added)

The histogram memory of the Applicant's invention is thus different from the "memory cell" of Westphal referenced in the Office Action, despite the allegation in the Office Action to the contrary, because the pulses counted during the gating period are all of the same magnitude and character, as clearly seen in FIGS. 2(f) and (g), each showing a string of identical discrete pulses Z. And, as a result, in Westphal, there can be no "calibration by energy range," as instantly claimed, which calibration, as explained, sorts pulses into different memory "boxes" based on energy.

### **Conclusion**

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Amendment and/or Reply to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-1698.

Respectfully submitted,  
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